AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICES CURRENT.

" *O fortunatos nimium sua si bona norint*
" *Agricolas.*" . . . VIRG.

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AGRICULTURE.

CONGRESSIONAL REPORT

Of the Committee on Agriculture, on the memorial of the Delegates of the United Agricultural Societies of sundry counties in the state of Virginia.

FEBRUARY 2, 1821.

Read, and committed to the committee of the whole House on the state of Union.

The Committee on Agriculture, to whom was referred the memorial of the delegates of the United Agricultural Societies of Prince George, Sussex, Surry, Petersburgh, Brunswick, Dinwiddle, and Isle of Wight, have had the same under consideration, and have agreed to the following

REPORT:

The committee consider it as a duty which they owe to the object of their institution, to the importance of the subjects referred to in the memorial, to the character of the memorialists themselves, and to the threatened interests of agriculture, to present a full, candid, and impartial statement of the views which they entertain of the policy of increasing the duties established by the present tariff.

Believing, as they do, that the agriculturists, as the most numerous portion of the community, are more deeply interested than any other class in the decision of this question, and that they must necessarily continue to be so for many ages to come, they conceive that no apology will be required, if they enter, somewhat at large, into the investigation of those principles which the policy involves. Nor will such a course be deemed incompatible with the object for which the committee was originally created; which they suppose was not so much to devise and propose plans for the positive encouragement of agriculture, as, by a vigilant exercise of their functions, to guard its political interests from encroachment.

The committee regard the question presented by the proposed tariff as one of the most important that has ever been offered to the consideration of congress. Important, however, as this question is, when considered in reference to the change which any farther restrictions on trade must produce in our foreign relations, it is yet more important when viewed in reference to those which it would effect in the subsisting relations of the several classes of the community; for, even if the favourite, though impracticable and useless object of the friends of the restrictive system could be realized, that of raising the prices of *all* commodities, although it would then no longer be a question, as to the degree of intercourse we should maintain with other countries, as there would be no intercourse at all, (for commerce never goes in quest of dear commodities,) and although the sources of wealth, intelligence, and improvement, derivable from an intercourse with the rest of the world, would be entirely destroyed; yet this evil, great as it is, would be inconsiderable in comparison with those which the system would produce on our domestic prosperity and happiness; in other words, its financial would be less injurious than its political consequences.

There are, obviously, two leading points of view, in which this, as well as other restrictive systems, may be considered; its effect to increase or diminish the national wealth, and its tendency to promote independence and happiness. These views, though necessarily in some degree, blended with each other, are, in many important particulars, distinct. But, before the committee enter into an examination of the system, they will notice briefly, some of the arguments which have been employed to recommend it, which, they believe, have only an incidental and collateral connexion with the subject, but which have been so much relied on by the advocates of the system, that they cannot, with propriety, be overlooked.

Among the most prominent of these, is the argument derived from the productive power of manufacturing, in comparison with agricultural and commercial industry, and the inducements which the quick returns of the home trade, the relative increase of population in Europe and America, the local advantages we possess in having at our command all the chief materials for manufacturing the obstacles which the restrictions of other nations oppose to an intercourse with them, and many other propitious circumstances hold out to the capitalist to embark in manufactures. It will not now be attempted to claim any pre-eminence for agriculture and commerce over manufactures, or for one kind of trade over another.

The latest and most judicious speculations on this subject tend to show that if there be any difference at all, it is much less than has been imagined; but it will merely be observed, that all those arguments which go to show the favourable circumstances under which manufactures may be commenced, and the disadvantages under which they must be procured from abroad, so far from being auxiliary to the system, tend directly to impeach it; for the question is, not the desirableness of manufactures, but the expediency and legality of the means of promoting them; whether, in order to establish them, we must not part with something still more desirable. Now all those arguments which go to prove that we cannot do without the aid of the law, are arguments against the interference of the law. If the times, and circumstances, have a natural tendency to promote the objects desired, why should we seek to obtain them prematurely, and by oppressive means? Such arguments are undoubtedly proper when employed to persuade the capitalist voluntarily to engage in manufactures, but they are absolutely preposterous, when used to induce the government to assist him, by taxing the rest of the community.

Another argument has been founded on the necessity or propriety of giving relief to those manufacturers, who were induced, by the state of things growing out of the late war, and the measures that preceded it, to vest their capital in manufactures, and who it is alleged have suffered, since the return of peace, for want of sufficient protection. This claim is not considered as well founded; because it is derived from the asseverations of the manufacturers themselves, that these persons were generally compelled, in consequence of their heavy losses, to sell out their establishments at a considerable sacrifice, so that their present proprietors must now hold them under extremely advantageous circumstances, and the proposed relief would not reach its intended objects. But, independently of this, the principal itself is too capacious to be admissable. It amounts to this; that government is bound to indemnify its citizens for all losses that can be remotely connected with its necessary acts, though they have been produced chiefly by their own voluntary agency. Such a principle would furnish just as good a claim for relief to the farmer and merchant as to the manufacturer. The diminished price of agricultural produce during the war, would be as good a reason for relieving the agriculturist, as the diminished price of manufactured produce at the return of peace would be for relieving manufactures.—Even therefore, if it could be made to appear, that an improvident spirit of speculation had no share in producing the distresses of the manufacturers; that the other classes of the community did not equally participate in them; and that relief would reach the true sufferers; it would be inexpedient to grant it; to say nothing, at this time, of the right of the government thus to relieve one class by taking the means from another.

An argument which is not deemed by the committee as material in the investigation of this question, but which has been, perhaps, more universally relied on than almost any other, is this: It is admitted that the system of free trade would be the best, provided other nations would pursue it; but it is said, if they will not buy of us, so neither should we buy of them, but should meet regulation by regulation, restriction by restriction. It is difficult to say whether this argument is addressed to our interest or to our honour, or whether it is addressed to either; for it is neither proposed, by the adoption of the restrictive system, on our part to compel foreign nations to abandon it, nor is it proposed to retaliate their injuries, with a view of punishing them for their alleged offence. Indeed, so far from its being contemplated by the manufacturers to coerce other nations to relinquish their restrictions, it can scarcely be doubted, that such an event would occasion great regret, because it would take away one of the principal arguments

on which they have relied for the adoption of their policy, whilst other considerations which recommend it to them would remain. But, in whatever the advice "not to buy of foreigners unless they will buy of us" may have originated, it is evidently worse than useless. How is it possible that we should buy of them unless they buy of us? The very word *buy* implies that something is given in exchange for that which is received, and what is giving in exchange but *buying?* That foreigners do not admit our products on the same terms that we admit theirs, does not render it less true, that in our intercourse with them, there is a complete exchange of equivalents. Undoubtedly the foreign system is injurious to us, and it is certainly not less so to themselves. Every retaliatory measure, on either side, injures both, unless it has the effect of making the other party recede, and even then, the injury suffered by the retaliating party is not necessarily counterbalanced by the good received; but to adopt restrictions with any other view than to force other nations to abandon them, is a course for which no apology can be offered. As long as capital continues to be employed in the foreign trade, it can only be because it is more profitably employed, than it could be, if it were withdrawn. It would be very unwise, because a portion of our capital is not so advantageously employed as it might be, under possible circumstances, to make it less so than it is,—because we cannot make things better, to make them worse. Besides, the refusal of foreigners to receive our raw produce is the injury of the agriculturist, not of the manufacturer. The object of the system therefore should be, to redress the grievances of the former, not those of the latter; but the agriculturist declares, that he does not ask the assistance of the government; that all he requires is to be let alone; and that it is absolutely unjust to make an actual grievance the pretext for imposing on him additional burthens. There appears to be less excuse for this system on the score of honour than on that of interest; yet the appeal to honour is one of the favourite topics of the friends of restriction. National honour is too often made to usurp the empire of reason and justice, and to decide controversies where it has no jurisdiction; and on no occasion, have its just prerogatives been more prostituted and abused, than when it has been made to extend over the province of trade and commerce, which, though, they should always be guided by individual honour, and indeed can only be sustained by a strict adherence to its principles, renounce all other authority but that of interest in questions of their extent, or direction. When the honour of the nation, is really involved, the agriculturists will be among the last to abandon it. National, like individual honour, is not adverse to interest, but is identified with it. National, like individual honour, is reputation, and reputation is power,—it is safety in peace, and strength in war. But, when the honour of an individual or a nation is assailed, it is by the violation of some indisputable right, which authorises the assailed party to demand redress, and, if it is not rendered, to punish the assailant. But, can it be pretended that any indisputable right of this nation would be violated, by the refusal of foreigners to receive our surplus produce? Is it not the undoubted right of every nation to adopt whatever municipal regulations it believes necessary for its own internal administration? As well might it be said, that an individual would compromise his honour, by agreeing to purchase an article of his neighbour, because this neighbour refused to receive that which he produced in return, but required him first to commute it into money. Honour has nothing to do with this matter; it is regulated, as it ought to be, solely by convenience. But it must be again repeated, that it is incorrect, in point of fact, to say that foreigners do not purchase of us to the same extent that we purchase of them; because it is impossible. "*There can be no buying without an equal selling.*" If we have had occasionally to pay them a balance in money, it is no more than they have often had to do to us; and if it always happened that we had to pay some nations a balance in money, it would not alter the case; for before we can purchase the products of any nation with money, we must previously have purchased that money of other nations with our products. Our most invaluable trade with the East Indies is entirely carried on with money.

Another argument has been founded on the encouragement, which it is alleged has been given by Congress to agriculture and commerce, and which it is urged, affords an equitable claim for encouragement to manufactures. It will hardly be asserted, that agriculture and commerce have received greater aids from government than manufactures. With respect to agriculture, it is not admitted that government has rendered it any service whatever; and it is moreover believed, that it cannot render it any service, unless it be to remove the restrictions which oppress it. With regard to commerce it is alleged, that it has been encouraged in two ways, by a navy, and by a system of commercial regulations. It is apprehended that the true and legitimate purpose of a navy is the national defence: but, if the navy can be considered, in any degree, as intended to protect commerce it is evidently intended to protect it, not against competition, but against violence; and there can be no doubt that the navy, and the army too, would be employed to protect manufactures, if they were assailed by violence. Even in this point of view, it is not believed to be the true policy of this nation to create an immense, overgrown navy for the protection of our commerce in distant seas; but to confine it to such limits when it shall be deemed to have attained them as is compatible with the national defence.—Whether those regulations and acts which were intended to encourage the commerce and navigation of the country, involve a departure from the maxim of letting things alone, and of not taxing one class for the support of another, the committee are not called on now to decide; but, passing over the argument for the navigation laws, that they were intended to be subservient to national defence, by creating a nursery for our seaman, and regarding them purely as commercial regulations the encouragement they are designed to afford to commerce and navigation differs, both in nature and degree, from that which has been already given, and which it is proposed still further to extend to manufactures. A nation adopting a restrictive system, with a view of coercing another nation to abandon it, is very different from its adopting it has a permanent part of its policy, under the delusive idea of promoting national wealth and independence. It proposes only to forego present, for the sake of future, and greater advantages. Undoubtedly, even in this case, it should be certain, that the means selected will ensure success; that success will pay for the sacrifices made to obtain it; and that it can be obtained in no better way. How far the navigation laws will fulfil these conditions time will fully decide.

It has also been urged, that when a nation has peculiar advantages for particular manufactures, and is ripe for them in every respect but that of skill, the government should afford such protection as will procure that skill. The propriety of the proposed tariff does not depend on the truth of this position; for, in the production of many of the articles on which it is proposed to increase the duties, we already equal other nations in skill, and, in others, the duties are more than sufficient to obtain it. But, it is asked, where is the propriety of the distinction, which would make the nation pay for a deficiency in skill more than in any thing else? The only ground on which any one would think of justifying the policy which would make either an individual or a nation the purchaser of this skill, or of any other requisite would be, that the temporary loss occasioned by the purchase, would be repaid when it was completely acquired. But does this prove that the nation should be the purchaser? Is it not more consistent with justice, that the capitalist, who is to derive the benefit of the acquisition, should make the sacrifices necessary to obtain it? If his capital is insufficient, the nation might as well be expected to supply that, as to supply the skill it employs.

The foregoing are some of the principal arguments which have been resorted to in support of the manufacturing system, which the committee think have little to do with the real merits of the question. It is not a complete enumeration of all of that description, and it is, hoped, that no excuse is necessary for not attempting to achieve such an enumeration. They therefore approach, with satisfaction, what they consider as the true question involved in the proposed alteration of the tariff; namely, *will the national wealth be augmented or diminished, and, if it will be diminished, are there any advantages which will compensate for the sacrifice?*—And they will undertake to shew, not only, that the necessary effect of such an alteration is to diminish, both *immediately* and *ultimately*, the national wealth; but, that so far from their being any compensatory circumstances, it is even more objectionable, in other points of view, than as a question of loss or gain; and that the *distribution* of the wealth of the nation which it will effect, will be more injurious than the *diminution*.

The committee have endeavoured to divest the subject of all extraneous considerations, with a view of giving to their arguments a greater degree of precision; and, they conceive, that, if the positions they have assumed can be clearly established, by a fair deduction from the most indisputable principles, they will save

themselves the necessity of replying in detail, to a multiplicity of irrevalent arguments which have been employed in defence of the restrictive system.

The first view of the subject, that which relates to the national wealth, presents a question strictly of political economy. The second, that connected with our independence and happiness, is partly a question of political economy, and partly one of general policy. The committee, will not, at the expense of precision and force, encumber their arguments with numerous statistical facts, and arithmetical calculations. Such calculations often have a tendency to mislead instead of to instruct; and the facts which are best established, have, after all, to be explained by the application general of principles. It is pre-eminently the case in the controversy between the manufacturers and their opponents, that the *data* which they have respectively relied on for the support of their opinions, have always been considered, by the opposite party, either as proving nothing, or as proving directly the reverse of what was intended. This can only be accounted for, by the supposition that the general principles of one or the other party, which they apply to the explanation of these *data* are erroneous. It will be attempted to show that the principles on which the restrictive system is opposed, are not liable to this charge, and that the soundest and most incontrovertible maxims of political economy, maxims derived from the impartial observation of facts, from accurate analysis, and from long and diversified experience, warrant this opposition in its greatest extent. They are aware, that those who appeal to general principles, render themselves liable to the charge of theory, by those who lay claim to exclusive practical knowledge, and as there has been a good deal of unmeaning declamation against the opponents of the manufacturing system, on this common-place, they will very briefly examine its justice. Theory is not the opposite of experience, for it may be strictly deduced from experience. It is nothing more than a system of general rules, founded on the observation of particular facts, or it is such a system founded on hypothesis. In the one case, it is true; in the other, it is generally false.—But this character of truth or falsehood is not peculiar to theory; it belongs equally to practice. Practice may be true or false—that is, it may be sound or unsound, good or bad; but all good practice must be founded on true theory. It is not enough then to say, that an opinion or a system, is a theory; it must be proved that it is a false theory; that it is not the rigorous result of an attentive examination of facts. And, in attempting to prove it, it will not suffice to oppose to it a single repugnant fact or doubtful experiment; or even many such facts and experiments, without showing in what respects they are incompatible with the theory, where the error lies, in what its falsehoods consists. The committee must, however, be permitted to observe, that the charge of theory comes with but little propriety from the manufacturers. Their notions of a home market, balance of trade, national industry, and their doctrines generally, involve theories which are not only not founded in facts or, even plausible hypothesis, but are in direct opposition to all experience. But to come at once to the subject:

The first position that it will be attempted to prove, is that the *necessary* effect of an increase of duties is to diminish, both *immediately* and *ultimately*, the amount of national wealth. The *loss*, however, of the nation, the *loss* of these who *pay* the duties, and the *gain* of those who *receive* them, do not always correspond, but vary with particular circumstances. In what manner this loss and gain are distributed in society, will be best illustrated by an example. If, for instance, a community of four persons were engaged in an occupation which enabled them to realize *six per cent.* on *equal* capitals, and three of them were to give the fourth *one per cent.* or *one third of one per cent.* each to enable him to carry on an employment in which, *unassisted*, he could only make *five per cent.* it is evident that the loss of the contributors would be *one per cent.* and that it would be exactly the *loss* of the community, whilst the extra *gain* of the *receiver* would be nothing: and, unless that part of his profits, which he received from the others, was as productively employed as it was by them, he might eventually be a loser, and thus still further augment the loss of the community. But this is a case that would not be apt to occur. The fourth individual must have something more than *six per cent.* which he already made, to induce him to abandon his old occupation, and pursue a new one, say *seven per cent.* In this case the others would have to pay him *two thirds of one per cent.* each. It is obvious, now, that the *loss* of the contributors would be *two per cent.* that the *gain* of the *receiver* would be *one per cent.* and that it would correspond with the *loss* of the community, which would also be *one per cent.* or the difference between the productive value of his old and new employment. If this bounty was given to induce an individual to continue an occupation in which he was already engaged then, although the contributor would *lose* all he paid, and the receiver would *gain* it, the community would *lose* nothing, as there would only be a transfer of wealth from one to another. This however, would not be the case with a manufacture thus continued by a bounty. There would be an immediate loss occasioned by the increased cost of consumption; nor would it be possible to make one employment so much more profitable than another, without its attracting capital from that other, and this would be the source of innumerable other losses, hereafter to be noticed. In the case that has been stated, it is clear that the *loss* of the contributors is exactly *what they pay*; the *gain* of the receiver is their *loss, less the difference* between the productive value of his old and new employment, and the loss of the community is precisely *this difference*. In manufactures, such would be the operation of a duty that was prohibitory—a duty that was merely protective, would permit a portion of the commodities consumed to be bought of foreigners, and thus a part of it would go into the treasury. This would not vary the proportion of the loss and gain of the contributors and receivers, but would, in some degree, increase the loss of the community, as composed of both, as this portion of the duty would be less productively employed by the government, than it would have been, had it remained in the hands of either of the parties. This does not prove that prohibitory are better than protecting duties. There are other consequences which make duties injurious in proportion to their amount. All these observations may be applied (*mutatis mutandis*) to the consumers, the manufacturers, and the nation under the protecting-duty system. Two descriptions of persons would derive the benefit—a few who continue their old employments, and a great many who engage in new ones. In both cases, the loss of the consumer is what he pays, and is unredeemed by any circumstances whatever. In the first case, the loss of the nation arises from the increased cost of consumption; in the second, it arises from this cause and the diminished productive value of the new employments of society. In the first case the gain of the manufacturer is the loss of the consumer, *less* the increased cost of his own consumption; in the second it is this loss diminished by the same cause, and the diminished productive value of his labour. But besides these direct losses, there are others indirect and collateral, which are, however, not less enviable; losses which effect the consumers, and, in some degree, ultimately reach the manufacturers themselves.

(*To be Continued*)

From the Southern Patriot of December 21, 1820.

Mr. Editor,

A fact in the natural history of our state has frequently excited my attention, without my being able to satisfy myself either from such books as a retired situation affords; or an interchange of opinions with my *agricultural* friends. I shall offer a few remarks upon this subject, and hope, by exciting the attention of those better acquainted with it, to *elicit* some satisfactory explanation.

Dr. Ramsay observes, that it is a remarkable circumstance that *Pine land*, though comparatively barren affords nourishment to Pine trees which *maintain* their verdure through winter, and adds "this may perhaps in part be accounted for by the well known observation, that much of the Pine land of Carolina is very superficially sandy; for by digging into it a few feet the soil in many places changes from sand to clay." The inference from this, is—that the sandy soil produces the growth of the Pine, and that the Oak and Hickory, or what is generally termed good land, does not grow upon such soils as produce the Pine. I do not assert that our historian was of this opinion; though Planters generally act upon such a theory. Having repeatedly examined the soils of good Oak and Hickory, and also that of good Pine lands, I believe the following statement will be found correct.

In the same districts you have an entire growth of Pine upon a clay soil, and upon apparently the same kind of soil not many miles off, the growth is Oak and Hickory. Again the light soils in one place show a growth of Pine, and in another the Oak and Hickory foliage. My remarks allude particularly to the districts of Colleton, Beaufort, Barnwell, Orangeburgh, Edgefield, Lexington, and Newberry. In some of these districts the surface of the earth is covered with stones and small rocks, here also the same circumstance exists, for while one portion of these stoney lands exhibits naught but Pine trees; another will be thickly covered with Oak and Hickory, and generally the soil a stiff clay. It is a circumstance no less singular than true, that the Oak and Hickory lands, be their soil what they may, when thrown out of culture for some years, grow up in Pines; and the Pine lands when deprived of their original growth, produce the Oak and Hickory. This takes place, whether the lands have been cultivated or

not; if they be preserved a few years from the fatal effects of burning the woods.

If we turn our attention to the soils of the inland swamps in the lower districts, we find also a great diversity of soil in the same swamp—while a part consists of a stiff blue clay, another has much sand mixed with the soil; and yet the growth of these swamps would not induce the examiner to expect much difference in their subsoil. Even the rich, valuable, and highly cultivated river swamps are not exempt from this diversity in the appearance of the soil; for although, generally, they seem to consist of a light, spungy and decayed, vegetable substance, some fields have a much *firmer* consistence, more resembling the clayey soil of the inland swamps. This I have been informed is the case in some of the most valuable and best *cultivated* fields upon the Combahee; and both soils have been for a number of years equally productive. Whether the growth, and the nature of the soils of our Sea Islands, show any thing similar to the lands upon the Main I know not—but, I have seen much very poor land near the Sea shore, with a growth of oak, &c. with such a sandy soil, that only its situation could induce a planter to clear it. I shall venture to add, if a collection of the soils, such as produce the pine, and such as are covered with the oak and hickory, be *compared*, they will not only puzzle the philosopher, but the planter, who imagines himself sufficiently acquainted with the nature of the soil he has been cultivating for years, to distinguish them. It is a general opinion, that in swamps where the cyprus predominates, the soil is more or less sandy; yet in those districts where there are many cyprus ponds, their soil is generally a black mould (from decayed vegetable matter) with a portion of sand, upon a blue clay foundation. Some of these ponds have been very productive under cultivation; while others without any visible difference in growth or soil, have failed. These ponds are generally wooded, also, with the black gum, and when cleared, and the fires kept out, produce a growth of pines. The practical inference I wish to draw from these facts, is, that planters should examine the nature of the soil more than they generally do, and not trust *exclusively* to the growth of the land; having often known the expectations of the cultivator to be disappointed, upon clearing land well wooded with the best growth, the soil being found too light and sandy. Drs. Jamieson and Shecut, in their statistical account of Orangeburgh District in the *appendix* to Ramsay's History of South Carolina, very properly distinguish pine land from pine barren; for there exists as much difference between good pine land, and pine barren, as there is between oak and hickory land with a good soil, and the same growth upon a sandy foundation.—It must not be inferred that I wish to compare the pine lands with the oak and hickory generally; but there can be no doubt since the introduction of the cotton culture, that there does exist in our State, a very large body of excellent cotton-land, whose principal growth is pine, with a considerable *undergrowth* of oak, hickory, dogwood, sassafras, chinquapin, &c. &c.—and from the *annual* decay of the straw, leaves and grass, the lands are much improved from what they were 20 or 30 years ago. I have often heard the old settlers in the pine land district attest to this fact; and declare, that where we now see much undergrowth, the face of the land was so bare, that you might track a turkey through them.

Along the sea board, the lands near, and adjacent to the swamps are usually the most fertile. In those districts where pine is the usual growth, the lands upon the margin of the swamps are not as lasting as what may be called the middle grounds from the swamps, and these lands often show a clay soil within a few inches of the surface, though generally the clay is found two feet within the surface of the earth.

In some of the lower districts we see a stiff clay soil, with altogether a growth of Pine, the land flat and rather low; I do not err much when I add, that few Planters approve of the culture of such lands. In some of the upper districts, on apparently the same kind of soil with only a higher situation, fine crops of corn and winter grain may be produced. Would it be placing too much confidence in theory, to expect good crops of the same kinds from similar low lands, were they properly drained and broke up with the plough both before and during their culture?

From such observations as I have been able to make relative to the nature of the soils in the districts I have named, we may conclude that there is much good planting land with a growth of Pine in some cases, upon what would be called by an English farmer, a Sandy Loom upon a clay sub-soil—in others the clay exists nearly altogether. In some parts of Colleton District, there is much first rate cotton land, the growth Oak and Hickory, with a soil so similar to the Sandy Loom of the good Pine lands, as to preclude a *discrimination*, and producing fine crops. In Prince Williams and St. Luke's Parishes, we find much first rate land, the growth Oak and Hickory, but the soil more upon the clay. It is generally concluded that the stiff lands are most calculated for the culture of tobacco, corn, and all kinds of small grain, and that light soils, with a good foundation, suit the culture of the cotton best. It is no uncommon sight in the upper *districts*, upon their stiff soils, upon one side of the road, to behold very fine corn, but inferior cotton on the other, the fields apparently cleared the same time. I believe it to be a correct observation, that, the light lands stand either much rain or great droughts better than the clay soils, and corn will often *wilt* upon the clay lands, when the light soils show no such appearance. One great cause of the uncertainty of crops upon stiff low lands must be attributed to a want of due attention to draining such lands properly, and breaking up the soil well, both before planting; and the alleys during culture—one good ploughing between the beds in such lands, before the rains set in, would effect much in promoting the absorption, and preventing the *ill* effects of either droughts or great rains. Upon this subject Taylor's Arator, the American Edition of Sinclair's Code of Agriculture, and the *American Farmer*, should be read by every Planter in our State.

In England, and other parts of Europe, where the science of Agriculture is carried to the greatest perfection from *causes* which cannot exist in our country for some time to come, a knowledge of the nature of the soil is considered indispensibly necessary to the system of manuring and ploughing, as it has been ascertained by their practical farmers that each kind of soil requires in some degree its own kind of manure and mode of ploughing. Although I am aware that in our country, good crops are made without any necessary connexion with a knowledge of the soil, yet I think it must be granted by all practical men, that if we would devote more attention to this subject, there is every reason to expect much useful information upon Agriculture generally; and especially that of reclaiming much land in our State, which though apparently rich, is unproductive—I allude to *marsh* and *low* lands generally. It is in vain to exclude *theory* from planting, for he who may effect to *ridicule* it, is in fact guided by it as well as the one who may attach too much importance to it. Perhaps three fourths of the members of our Legislature are actually concerned in the cultivation of the earth, and strange to say, a committee upon the *all-important* subject of agriculture is not to be found upon their journals! I hope the Curators of the South Carolina Agricultural Society, and indeed, the officers of all such associations, will call upon their *Representatives* to extend their fostering hand to aid their exertion to excite and produce a spirit of emulation in the breast of every farmer. I would not hazzard much by adding if South Carolina, upon this important branch of internal policy, imitates the example of New York, and other States, that such improvements in the Agriculture of our state would soon take place as fully to attest the propriety of the measure. If on the appearance of the soil in some of our districts my brother farmers view the *sketch* I have attempted in a different light, I hope they will examine for themselves with some attention, their own *woodlands*; since in my opinion, it would be as correct to estimate the contents of a book, by its binding, as to value land, *solely*, by its growth. It would afford me much pleasure, could I hope as a pioneer, to clear away a few of the brambles and obstructions, which retard the progress of the Agriculture of my native State.

A COTTON PLANTER.

COMMUNICATED FOR THE AMERICAN FARMER, BY G. W. JEFFREYS.

Virginia, Port Royal, October 28th, 1818.

Dear Sir,

Enclosed is a little Isbell wheat of the original species—I could not get any sooner, but it is not too late to sow it. A gentleman who lives some distance from me, and who from an experience commencing with its discovery, highly approves of it, furnished me with it. By sowing it near to, and managing it like the bearded species sent you some weeks past, you may accurately compare their qualities. That sent is not a fair sample of this kind of wheat, nor of that before sent, as a severe late frost this year, after it was headed, both shrunk and coloured the grain. This wheat was in high repute for some years after it was discovered, and then was gradually relinquished because the crops diminished, owing, in my opinion, to the impoverishment of our lands and bad agriculture, rather than to the sort of wheat. Its qualities are to produce one third less straw than latter wheat to be much less liable to rust, to make better bread and rather more flour to the bushel, to be less liable to the fly and more to the weavil, both in a small degree than latter wheat, and as this year proves, to be liable to considerable injury from frost, once in 30 years.

I am,
respectfully sir,
Your most obedient Servant,
JOHN TAYLOR.

N. B.—I think it very probable that this wheat may suit your soil and climate.

LUCERN.

From Dickson's Farmer's Companion.

Continued from page 374. vol. II.

After Management—As the economy of this plant is such as to render it incapable of being grown with much advantage where other sorts of plants, whether of the grass or weed kind, are apt to annoy it, much care and attention should of course be employed in keeping it clean and free from the intrusion of all such vegetable productions. This may be effected in different ways according to the methods in which the crop has been raised. When the broadcast plan has been pursued, little is necessary where the land has been properly prepared, after the grain crop has been removed, except keeping all sorts of heavy stock from coming upon it. In a dry season, if there be occasion, the field may however, be fed a little by calves and other very light stock, but they should never be kept long upon the plants at one time.—— When the second cutting has been made in the following year, if any grass shows itself, the land should be harrowed over in a moderate manner by a harrow which is not too heavy or too long in the tines, twice or oftener, as may be necessary, in different directions, the grassy matter being collected by a small light implement of the same kind, and removed from the land. This business should be executed as soon in the early part of the spring as the nature and state of the ground will admit, as dry a period as possible being taken for performing the work. In the succeeding years too such

harrowings may frequently be required, one in the early part of the spring season and the other in the close of the summer. But in these cases, especially where there is much grass appearing, a much heavier sort of harrow should be made use of. Some advise one of such weight as is sufficient for four horses, and which does not spread more than four or five feet; but in most cases, especially when the business is so frequently done, one that requires less draught may be adequate to the purpose, as where such large heavy harrows are employed, there is much danger of injuring the crowns of the plants, and thereby causing their destruction; whereas by the use of lighter ones they are mostly much benefited from the mould being stirred about their roots. After these harrowings, as in the above case, the weeds should be brought together and removed from the ground. Where the crops are thin and patchy, seed in proportion to the deficiencies should be sown over such places before the harrowings commence each time. In every case the rollers should be applied immediately after the operation has been performed, not only for the purpose of pressing the mould about the roots of the plant, but to render the surface perfectly level and fit for the scythe.

In the broadcast method of culture, where the produce it not to a considerable extent, it is probably better to feed the crop by light cattle in the autumn than to mow it.

In the drill-sown lucern some recommend, where the rows are sufficiently evident in the autumn season, after the grain has been secured, the passing of a small shim between them, in order to extirpate all the weeds and grassy materials, as well as to loosen the mould about the roots of the plants, and that they may be rendered more perfectly clean, the hand-hoeing of the plants in the rows. In the succeeding year still more particular attention to the use of the shim and hoe will be requisite. The business should be begun as early as the state of the soils will safely admit of its being executed; being continued occasionally in such manner during the whole summer, as is sufficient for preserving the crops perfectly clean and free from all sorts of weeds. But in order to accomplish this in the most complete way, great circumspection is necessary, immediately after the lucern has been cut, to the extirpation of the natural grass plants and the weeds of other kinds, as at this period they can be discovered and removed with the greatest facility and despatch.

The crops raised in the transplanted method, as they are put in so late in the summer season, will demand but little regard in the autumn——one, or at most two slight hoeings may be sufficient for the purpose. But in the following year's culture the same management will be proper as in the preceding case.

When the soils on which the plant is grown are not of considerable fertility, the occasional application of manure may be of great advantage in thickening and increasing the quantity of crop. For this use clean well rotted dung is probably by much the best manure, as where earthy compost, ashes, or soot are employed, they are apt to promote the growth of, or bring up common grasses too much. The latter are however, sometimes sown over the crops in the winter season. The dung is advised by some to be applied in the quantity of about twenty tons to the acre every five or six years. Others, however, think it a better practice to put a light coat on annually in the early spring season.

The culture of this sort of crop is obviously attended with considerable expense, both in its first establishment and the after-management which is necessary to ensure its success. The inexperienced cultivator should not therefore commence this kind of husbandry too hastily, without considering how far it may suit his circumstances.

As this is one of the most forward of the artificial grasses, it frequently attains a sufficient growth for the scythe towards the end of May or beginning of the following Month, and in soils that are favourable for its culture will be in a state of readiness for a second cutting in the course of a month or six weeks longer; being capable of undergoing the same operation at nearly similar distances of time during the whole of the summer season.

The produce of this sort of crop in converting it to the purposes of soiling cattle, must necessarily be different under different circumstances; but an acre can seldom, when under proper culture and management, support less than from three to five or six horses or other cattle during the six summer months; the profit of which cannot be less than from seven to ten or twelve pounds.

And in letting it remain for hay, which is less advantageous, in the three mowings, an acre, where the crop is good, will seldom afford less than from three to five tons of dry hay.—In Mr. Arbuthnot's trials, the produce was four loads, but in those of others, or rich grounds, it was five. In making this sort of plant into hay the same directions should be attended to as for clover; the less the produce is shaken about the better, provided it be sufficiently, and quickly dried; as the leaves will be more fully preserved on the stems, and the hay of course more valuable.

In the application of the crop the principal and obviously the most advantageous practice is that of soiling horses, neat cattle, and hogs. But as a dry fodder it is also capable of affording much assistance in many cases. And, as an early food, for ewes and lambs, it may be of great value in particular cases. As this plant bears repeated cutting better than most of those of the artificial grass kind, springs in a more quick and expeditious manner, and affords a healthy nutritious food; in soiling, it must be of vast utility to the farmer, where horses and cattle form a large part of his stock.

In the soiling of cows and other sorts of cattle in the fold-yards, and in the feeding and fattening of oxen, its importance is equally great. In feeding cattle with this sort of food in its green state, care is necessary, however, not to give the animals too largely at a time, especially when it is moist, as they may be *hoven* or *blown* with it in the same way as with clover.

The trials in fattening bullocks, or other cattle, with this green fodder are not numerous——but they are sufficiently so to prove its utility in such application. In Mr. Young's trials cattle were found to increase fast in flesh by it, paying at the rate of four shillings and sixpence a head per week, which is considered as a great proof of the value of the plant: in this view its superiority to tares he thinks prodigious. It has also been considered of great value in this view in Ireland, by Mr. Herbert, after much experience. The great power which it possesses in fattening is, indeed rendered sufficiently evident, by the sudden effects which it produces in soiling horses. In most instances they get into high condition in a short time, becoming "*fat without oats or hay*" in some cases.

Sheep have likewise been fattened on this green food with great success in Mr. Baldwin's trials.

In soiling hogs in the fold-yards it has also been attended with considerable success. And it has been suggested, that as these animals do not bite so closely as sheep, they may be admitted upon the crops with greater safety. A plot of it contiguous to the yards might in this view be highly beneficial.

It is sufficiently clear, from these statements, that soiling is a highly beneficia lmethod of disposing of lucern crops, and far superior to making it into hay.

Though crops of this sort should not, by any means, be fed close with sheep stock, it is probable that, in particular cases, they may be applied as an earlier green feed for ewes and lambs with great utility and convenience, as they may be relied on for this sort of feed much sooner than any other kinds of artificial grass crops especially in soils of the rich, dry, and warm descriptions: being often ready for the purpose soon after the middle of March, affording a good bite through the whole of the following month, the most difficult period for the providing of suitable support for this kind of stock. The benefit produced in the healthy growth and improvement of the lambs in this mode, will much more than counter-balance any loss sustained in the first cuts for soiling of horses. The sheep should not, however, remain on longer than while the first shoots are eaten down.

On the whole, though this plant is capable of being thus usefully applied, considering the very great expenses which are necessary in raising and keeping lucern crops in a state of production and their affording but little produce, especially when sown without corn, for the first years notwithstanding they appear to yield a great advantage in the practice of soiling animals, it is probable that much of the profit depends upon the method of consuming them, and not on that of the particularly advantageous nature of the plants. Its superiority to clover, when the differences in the expenses of their culture and other circumstances are fairly brought into view, will not perhaps, appear so great as many on a superficial observation may have supposed. The point on which it most materially excels that invaluable plant is the duration, or time which it lasts in the ground, after being once introduced, continuing from ten to fifteen and even twenty years, according to the state and nature of the soil, and the attention

that is bestowed in the after-management.—This is, undoubtedly, a circumstance of the first importance, in cases where the cultivator wishes to avoid the trouble and expense of grain crops. as he can keep a suitable extent of land under this crop for the purpose of soiling his stock without them, while with clover it is utterly impossible. Where the proportion of land is small, and the quantity of cattle and horse stock disproportionately large, it is a plant admirably calculated for the cultivator's purpose, when grown conveniently to the farm yards and kept in due order by proper cultivation. It has also been recommended on dairy farms as of great utility in supporting the cows and increasing the quantity of milk. Where the soils are suitable a few acres under this grass round the house must in almost all cases be valuable for the purpose of early green food.

On attempting to break up land that has been long under this sort of crop, it has been sometimes found from the great strength of the roots of the lucern plants, and the consequent difficulty of destroying them, that the crops have been restored in such a manner as to induce the cultivators to leave it again for the production of this grass. In situations where such grounds could be conveniently flooded, or covered with water occasionally, they might, therefore, be very advantageously converted into good meadow or grass lands; a sort of application that has long since been recommended by a French writer.

When such lands are perfectly broken up, they afford in most cases, admirable crops of the grain kind. Oats, as being the least injured by a luxuriant growth, may in general be the most advisable as the first crop.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 23, 1821.

ON THE CULTIVATION AND MANAGEMENT OF

TOBACCO.

In vol. I. of this work, page 393, we offered some observations on tobacco, relating to such particulars in the early stage of its growth, as required to be attended to at that time—we propose now to complete the directions for the cultivation and curing of this wonderful plant; and here we take occasion to repeat that our sketch is prepared not with the hope of suggesting any thing new to those who are acquainted with the process, but for such as have either never seen, or are practically ignorant of the whole management of tobacco. This explanation will justify a minuteness of detail that might otherwise appear unnecessarily particular.

Varieties.—Of the tobacco plant, there are many varieties, under as many *names*. These are sometimes derived from the name of the *person* who, in a neighbourhood or county, was first observed to cultivate and countenance any particular kind most extensively—but it oftener takes its name from the shape, form, and properties peculiar to it. Very much the same fashion occurring in this case, as in that of apples, cherries, &c. &c. &c. That however, which has the broadest leaf and the smallest stem, is preferred, for obvious reasons, by the merchant and manufacturer. There is nevertheless, little doubt but its shape and qualities are susceptible of being modified by *crossing the breed*, just as Indian corn and live stock may have their qualities changed and diversified, by selecting for propagators, plants and individuals of different families.

A wealthy and eminent farmer of Prince George's County, to whom these notes were submitted, remarks that " From the best observation he has been able to bestow upon this very interesting part of a planter's concern, he is satisfied there exists in that county, only three varieties, but these, owing to the difference of soil (which is manifest and frequent on almost every farm) of culture, the time of planting, and other fortuitous causes, have assumed various appearances and are known by almost as many names as there are neighbourhoods in our county.—The varieties he alludes to, are the *burley*; the *narrow leaf thick sett*, or *twist bud*, as it is most commonly called; and the *broad leaf thick sett*, which last he thinks very probably has been produced by a mixture of the Burley, and narrow leaf thick sett, as there can be no doubt, as I suggested, that the shape and quantities of this plant may be altered or modified by " mixing or crossing the breed."

The Burley appears to have been the most ancient, and, until lately, the most esteemed kind; but recent experience has convinced almost every one, that it is the least productive. It is however, certainly a fine tobacco, notwithstanding it yields less than the thick sett, and appears to be peculiarly adapted to particular soils, such as low, flat, stiff and wet lands. It it much less liable to *spot* or injure in the field when ripe, than any other tobacco, and those who depend upon the *above described lands* for a crop, would always do well to plant the Burley. It cures finely and is much esteemed in the market.

The narrow leaf thick sett, or twist bud is considered the best tobacco for weight, and is very much cultivated in all the lower counties of this state. It may be known by its remarkably small stalk, the great number of its leaves, which are long and narrow, with numerous fibres and thick stem. On good land, this tobacco has been known to have from twenty-five to thirty well made leaves, on a stalk not more than twelve or fifteen inches long. If not topped too high, the upper leaf will fold over and touch the ground before the plants is fit for housing. This tobacco also cures well, but is extremely liable to spot and damage in the field, even before it is made, or more properly speaking before it has attained its growth. In *wet seasons* it *rarely ever goes ripe* and *souud* to the house.

The broad leaf, thick sett, which is the kind now most universally cultivated by the Patuxent planters possesses advantages which give it a decided superiority over any other variety of this plant.

It yields more than the Burley, and not much less, if any, than the twist bud—it cures quite as well as the Burley—the leaf is much broader, the stem is small, the fibres delicate, and the texture smooth and silken. It is not so apt to spot as the twist bud, and ripens sooner than the Burley. In short, it appears to be an admirable medium, between the two, equally exempt from the faults, and partaking of the advantages of both. This tobacco acquires its greatest perfection in light rich soil.

Firing.—By firing, tobacco is more easily and sooner prepared for packing, and cures of a brighter colour, but it will, if not too much crouded in the house, cure very well without firing. It requires eight or ten cart loads of wood, say three to four cords to cure the contents of a house of ordinary size—that is, fifty by twenty-four feet, the usual size now built in Prince George's County, of this state. The manner of firing in that county, where the operation is much practised, is to kindle two rows of fires nearly the whole length of the house, approaching each end as nigh as can safely be done, say six feet; the two fires being about equi-distant from each other, and from the sides of the house. To make these fires, a shallow trench is dug in the floor, which keeps the logs from rolling and spreading the fire. All sorts of wood are used for this purpose, but to the end, that it may, as it ought to be, first partially seasoned; it should be cut the preceding winter, or at all events by the first of August.—It then makes a clearer fire, and the smoke of it is less moist; nevertheless, green wood is often used. The risk of firing under a master or manager of wary and cautions habits, is not great. There are many old planters who have never lost a house by it.—When fire is used, no tobacco should be hung on the two lower tiers, except a few stalks on the sides and in the centre of the house, taking care that they do not approach too near the fires—some are so cautious as to leave the three lower tiers unhung while the fires are kept up. When tobacco is not to be fired, it ought to be hung very thinly, say eight or ten plants on a stick—if the plants be large, fewer—and the sticks should be placed far enough apart to prevent the plants from pressing against each other.—In fact, it is the want of house room, more than the difference produced in the quality and price of tobacco, which induces the practice of firing; for by firing, one house is made to contain double the quantity of tobacco that it otherwise would.

After the fires are taken out, which should not be for five or six days (some fire longer) the doors and windows should be thrown opon, and except at night and in rainy and damp weather, kept so, till the house is fit to re-hang, which should not be done till the stems are cured; else the tobacco will house burn and probably rot. Fires should be kept very low for the first day or two—then raise them gradually.

That which is first housed, on being subjected to the influence of fire, cures in a much shorter time, and admits of being very soon *re-hung*, and the house filled up again—thus the whole crop is housed securely, before the approach of frost. If however, no other object was produced by firing than the difference in

the quality of the article, it is not certain that this object alone would not be considered a sufficient compensation for the additional labour, expense, and risk which firing superinduces,—The objection, however, on the score of expense, so far as that results from the *wood* consumed, applies with peculiar force in old settlements; where, from the improvident ravages committed on the native forests, every tree has its intrinsic value. In new settlements, the mere value of the fuel consumed would not be considered worthy of being reckoned—but here again firing is of less importance; for tobacco made on new land always cures brighter and better than that which is the growth of old fields. It is, after all, believed that between tobacco made on the same field, fired, and not fired, there would be an average difference (in the sale,) of not less than one dollar per hundred.

Impediments to its Growth.—The two most formidable enemies to tobacco, are the *fly* and the *worm*. The depredations committed by the former are believed to have increased of late years to an alarming extent—so much so as to render a supply of plants very precarious, and sometimes impossible. A preventive, or a means of destroying this vexatious insect, has become a desideratum, for the discovery of which, the author would deserve the benedictions of the planting community, as would he those of the farming class, who would devise some means of extirpating the turnip and Hessian fly—let us here inquire whether if experiments had been made, and enterprise displayed commensurate with the evil, some remedy for this egregious plague would not have been discovered before now? It is well known that some trees and barks are destructive of certain insects—let decoctions and other external applications be made until relief be found. These flies commence their attacks on the plants when very small in the bed, and devour them with increased voracity, in cool, dry, cloudy weather. We don't pretend to say what *would* succeed, but have no doubt, that by trying on different parts of the bed, a great variety of experiments, something would be found to answer. Let a valuable premium he raised by subscription, in tobacco districts; and judges appointed to assign the reward to him, who shall discover a method of preventing, or of rapidly exterminating, the fly in tobacco beds. I am inclined to believe that planking the bed round to the height of 20 inches is the best preventive yet proposed.

Of the Worm.—There are various kinds—the ground or cut worm, which is the colour of the earth, which works by night, and in cloudy weather, cutting off the plant in the field when small, near the surface of the ground—and last year a new enemy of a peculiar and formidable character attracted the notice of Dr. Muse, of Dorset County, whose researches in Entomology are the more to be valued, since so few men of science apply their talents in a way to enlighten and guide the labours of practical husbandry. The worm mentioned by him has not yet made its appearance on the western shore of Maryland, as we believe. In a paper signed Agricultor, and published in the first volume of this work, page 72, the reader will find a particular description of this new invader. "An insect, says the Doctor, of a very peculiar kind, has appeared in my tobacco, this season, and has been infinitely more injurious to it than the cut worm, which last feeds only by night and in cloudy weather, whereas the former by day, as well as night, and in all the varieties of weather is equally voracious. I have never before seen a similar insect, nor can I learn that such an enemy was ever enrolled among the host that infests that plant."

"This insect is, in point of habit, an anomaly in the insect tribe. The state in which that whole class of animals annoy vegetation, is that of the larvæ or caterpillar; in the winged or parent state, they have been deemed I think universally harmless, and I am pretty certain of the fact, in regard to all the variety of plants that constitute the farmers' crop; but this insect winged and fully matured, has, in a lot of thirty thousand hills of tobacco, growing finely, destroyed in a few days after their appearance, at least one half of them." From the same philosophic observer, we hope to learn the result of his further investigation of the natural history and habits of this new, unwelcome intruder.—There are again other worms which prey upon tobacco in the more advanced stage of its growth, devouring the leaf, and leaving the stem naked—such as the large green, horn worm; and others, too generally known to require description here, and if not known to those who have not cultivated tobacco, they will not fail to make their appearance whenever the bait is held out.

To destroy worms.—This is best accomplished on a large farm, by raising *turkeys* for that purpose, which is now regularly done by extensive Planters. They may be exclusively relied on, unless the worms appear in unusual numbers, when it becomes indispensible to use every possible means to destroy them *speedily*, for in a short time they make terrible inroads on the crop. One turkey for every thousand plants, is a larger number than is usually kept—50 turkeys will keep 100,000 plants clear. The gang of turkeys is slowly driven regularly over every part of the field——and so indispensible is their labour, that the Planter reckons the worm killing services of a turkey above the value of his meat.—We beg our eastern brethren to recollect, that several months intervene between the worm-killing and the turkey eating season. Their visits in the mean time, to the fodder house, and the hog pen, have a wonderful effect in purifying their flesh until about Christmas—when a fat hen turkey, and a ham of bacon, make a very tolerable dinner.

Quantity to the acre.—The best lands in this state, produce from one thousand to fourteen hundred weight to the acre. It is not often that tobacco grows too large, but the largest plants never cure the best.

Soil and climate.—Light, rich, high land is esteemed to be productive of the best tobacco; we have heard it observed, that the district of country in Maryland, where tobacco has been hitherto most extensively cultivated, yield a quality, soft and silky to the touch and emitting a flavour not to be found in the growth of any other state in the union; that tobacco, like the wines peculiar to particular districts, depends not so much on cultivation or management, as on the soil of districts; well defined, immediately beyond the line of which—the same vine, if transplanted, no longer yields wine of the same flavour.

Its tendency to exhaust land.—Strict inquiry and observation, induce us to believe that the effect of the tobacco culture, in its tendency to exhaust the land, is very much exaggerated in public estimation—a very successful and exemplary planter in the richest district of Prince George's county, once observed to the Editor of this Journal, "I have never believed that tobacco exhausted land more than Indian corn, or as much as wheat, and by a proper rotation of crops, it can be raised on the same land for ever, without any other aid than what may be derived from clover and plaster of Paris."—The same opinion has been given to us by an eminent planter, Mr. William Bowie, whose last year's crop was 160 hogsheads. He added, that he had repeatedly observed both his wheat and clover crops succeeding corn, to be inferior to those which followed tobacco, on land of equal strength.

The best rotation.—The usual rotation in that portion of our state, where this subject is best understood, and where the greatest improvement is making in the practice and prospects of agriculture—is to have, first a crop of tobacco, followed on the removal of the tobacco, by wheat or other small grain, on which is sowed in the spring following clover and plaster of Paris usually, but very improperly, without harrowing. The field then remains in clover one or two years, when tobacco again succeeds the clover. Pasturing the clover down, is commonly preferred after ploughing it in, for what reason we don't exactly comprehend, unless the clover crop being ploughed in keeps the land too dry, open and chaffy, during the planting and growing season.

On the use of plaster, with tobacco.—It is to be remarked that the too free use of plaster on tobacco injures its quality; that it makes it darker. There are various modes of applying it, some sow it broad-cast, two bushels to the acre in the fall, on the land they intend for tobacco and repeat it again in the spring, soon after the crop is planted—others sow it in the spring, soon after the land is fallowed; whilst others again put it, about a table spoonful, on the plant after it is planted, or in the check, and make the hill on it—applied in either way, it increases the crop and augments the fertility of the soil, but unless used on lands that are very light, it keeps the plant too green to cure of the brightest colour.

Getting in order.—After the tobacco has been stripped and bulked away as described in volume 1, page 393, the next thing is to get it "*in order*" for packing. The old practice was to wait as described in the essay before referred to, until the tobacco begins to heat in the bulk; but that practice is

now exploded amongst the most experienced growers of this article. One whose judgment no less than his long experience, give the weight of authority to all he says on this matter, informs the Editor, that tobacco when stripped, if well cured, should not lay longer than three or four weeks in bulk, and should never be suffered to *get warm*, (which was the old practice,) before it is shook out, and straddled on sticks so far apart as not to touch on the stick, nor should the sticks be hung so close as that the tobacco on one can touch that which hangs on the next. In this situation, the tobacco must hang until it gets thoroughly dry, stem and leaf; and the first time it comes in order after this, so as to admit of being handled without breaking, it may be bulked down again, in bulks double the size of the former ones, and will so remain for ever, without danger of spoiling and may be prized as convenience admits; but ingenuity and experience are every day suggesting labour-saving improvements, and accordingly, we are now very satisfactorily informed, that the troublesome practice of conditioning tobacco by hanging it up in the house, is giving way very fast to the much neater and less troublesome method of *windrowing*; which is, to bulk it down tightly without kneeing, or compression of any sort, in two courses or rows of bundles, taking care always to turn the heads out. In this situation, the tobacco becomes *perfectly dry*; which is the only object proposed by hanging it up, and when in most weather, it again comes "in order," it may with perfect safety be bulked away for packing in larger and more compact bulks. But this mode of treatment applies only to tobacco which is *thoroughly cured in the stem*. Sometimes tobacco is stripped before the stem is entirely dry—whenever this occurs, it must be crossed on the sticks as before-mentioned, for if bulked in that condition, it would moulder and perhaps rot. This brings us to the point of *prizing*, which will be treated of in our next, with engravings, to shew the different modes of performing that operation which have fallen under our observation.

Present Prices of Country Produce in this Market.

FLOUR, from the wagons, $3 75—WHISKEY, 25½ cts. per gal.—HAY, per ton $16—STRAW, do. $9.—RED WHEAT, 70 to 73 cts—WHITE, do. 73 to 78 cts.—RYE, 40 to 42 cts.—BARLEY, 40 to 45 cts—CORN, 27 to 28 cts—OATS, 20 to 25 cts—POTATOES, 50 cts. per bu.—LIVE STOCK, $6 to $6 50 cts.—BEEF, prime pcs. 8 to 10 cts.—Corn BEEF, 7 cts—MUTTON, 8 to 10 cts.—HAMS, 10 cts—MIDDLINGS, 8 cts—BUTTER, 25 cts.—CHEESE, 7 to 8 cts. per lb.—TAR $2—TURPENTINE, soft, $2 to 2½—PITCH, $2½—ROSIN, common 1½—bright do. $3 per barrel.—VARNISH, 25 cts.—SPIRITS TURPENTINE 33 cts. per gal.—COTTON, good Upland, 15 to 16 cts. per lb.—RICE, $3 to $3¼—ship and flooring PLANK, $27 to 28—SHINGLES, best $8—common $3 to 4½ p. M.—OAK, wood, $5—HICKORY, $6 per cord—CLOVER, seed $6½—ORCHARD, grass do. $4—COCKSFOOT, do. $8—HERDS, do. $3—TIMOTHY, $5 SANFOIN, $10—MILLET, $5 per bushel—LUCERN, 75 cts.—SWEET SCENTED VERNAL $1 50—Cow grass 75 cts—TREFOIL, 50 cts. per lb.—RUTA BAGA, 75 cts—MANGLE WURTZEL, $1 75 cts. per lb.—CABBAGE seed, 25 to 37½ cts.—CAULIFLOWER, 75 to 100 cts. per oz.—spring TARES, $8 per bu.—PEAS, 25 to 75 cts. per quart—ONION seed, 20 to 75 cts.—LEEK, 31 to 37 cts.—short orange CARROT, 12½ cts.—PARSNIP, 12½ cts.—LETTUCE, 25 to 75 cts.—RADISH, 12½ to 31 cts.—BEET, 12½ cents—BROCOLE, 31 to 100 cts.—CUCUMBER, 37 to 75 cts. per oz.—TURNIP seed 50 to 125 cts. per lb.

No sales of Maryland or Virginia tobacco, that we can learn the present week.

A BLOODED HORSE.

It is desired to engage on shares, for the season, a Stallion of good size, of the best English stock, and of high character, as to pedigree and performance—Such a Horse, if obtained, would stand on a farm near the city—and would probably yield a large profit to the owner. A line addressed to the Editor will be immediately attended to—but in all cases of application, it is indispensible that the proof of blood should be clear—and the horse of superior size.—The Editor requests his subscribers to make known his wishes in this respect, where the communication of them may be likely to have the desired effect.

BENNET'S CLOVER AND TURNIP SOWING MACHINE.

This valuable Machine is now manufactured in Baltimore by Robert Sinclair, who keeps a constant supply of them for sale at 25 dollars.

By the use of it, seed can be distributed in the most regular manner, and sown even during the prevalence of high wind, or light rain. It is very simple in its construction, and is easily regulated and moved. The box is triangular, and rests in a bed made by blocks screwed upon the frame. It is placed in this bed when we wish it to operate, and taken out of it, and laid on the handles, as we go to, or from the field; or turn at the head lands, without desiring to sow. On the hub of the large wheel, there is a small bevel wheel fixed, that revolving gives motion to a pinion, through which a shaft passes, having a pinion likewise at its other end that moves a wheel, placed about the centre of the box, and almost entirely within it; upon the prolonged axis of this wheel, circular brushes are fixed opposite to holes in one side of the box: each hole is covered with two perforated brass plates, the inmost ones fixed, and the others so fitted as to be easily moved round, in front of the others. The perforations being in groupes of different numbers and sizes, the discharge of the seed is regulated to the desired quantity by causing the large or small, and many or few perforations to coincide.

By measuring a small piece of land, and the quantity of any seed discharged by the machine, whilst passing over it, we can easily adapt its use to our wishes.

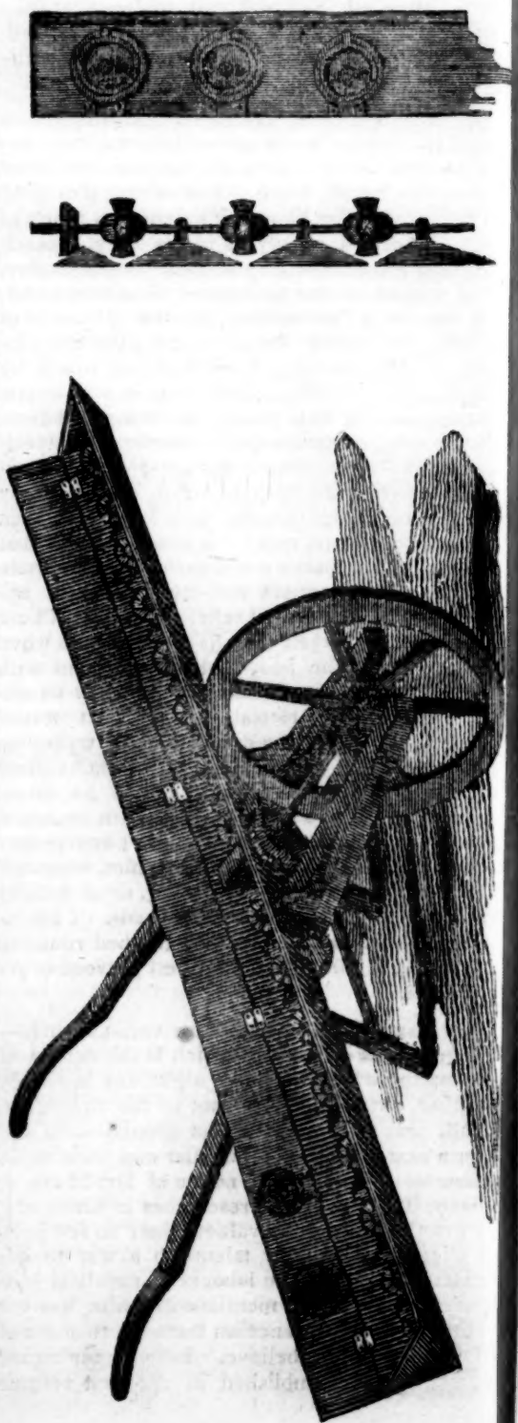
In the 4th volume of the Memoirs of the Philadelphia Agricultural Society, it is stated by Mr. Logan, that 'a man pushing this instrument before him, in the same manner as using a wheel-barrow, can sow 20 acres per day uninterrupted by wind or light rain."—And that gentleman then gives the following

"*Instructions for setting the Machine.*

"When you want to sow mixed seeds, such as rye-grass, trefoil, broad-clover, Dutch-clover, lop, or any other mixture of grass seeds, let them be well mixed before they go to the field, turn the large hole opposite the brush: the hole at full size will sow twelve or fourteen gallons on an acre, half the hole will sow about seven gallons. Three handles are sent with three iron pins in them; and if you intend sowing two gallons on an acre, put in the smallest, and bring the largest part of the hole to the size of the pin. If you would sow three gallons, take the next size: if four gallons, take No. 4. If you measure the seed into the box, you will find by the acre, whether it sows too much or too little. As there is a wide difference in grass seeds, should it sow more than you wish, set the hole a trifle less; if not enough, set it a little larger. In sowing turnips, one small hole at each brush will sow about two pounds on an acre; two holes six pounds; but of Sweed's turnip, not quite so much, the seed being larger. If you intend sowing one pound of turnip seed per acre, put one hole to every other brush and a blank to the others; and if the seed be good, and the season kind, it will produce a good crop, and come in lanes, if you harrow the same way the seed is sown; which will need less labour to hoe them. In sowing broad clover, five holes will sow about eight pound on an acre; of Dutch clover it will sow about eleven pounds per acre, and so in proportion of any other seed of the same size."

The following certificate is given as to the usefulness of the Machine, by an intelligent gentleman of this vicinity.

"I hereby certify, that I have had one of Bennet's Clover Machines three or four years, and do highly approve of it, as it has answered my most sanguine expectations; and when it is used, I believe that one fourth less seed and labour will answer, owing to the regularity of its sowing, and another great advantage, there is no stoppage on account of high winds or light rain.

JESSE TYSON."

Baltimore, 2mo. 6th, 1821.